

AMENDMENTS TO THE CLAIMS:

1-67. (canceled)

68. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, pulses of electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore and in the absence of visible Xray or ultraviolet radiation damage on said skin surface, the applying of said pulses including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said pulses of electromagnetic radiation being

characterized by parameters including pulse duration of less than about 2 seconds, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

69-72. (canceled)

73. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising applying an effective amount of pulsed electromagnetic radiation to a skin surface to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface being effectuated in the absence of an applied exogenous chromophore on said skin surface on at least one occasion within a predetermined interval of the exposure of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a

healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, the applying of said electromagnetic radiation to said skin surface being effectuated within a predetermined interval of the exposure of said skin surface to Xray or ultraviolet radiation, the applying of said electromagnetic radiation including applying electromagnetic radiation to said skin surface in multiple temporally spaced sessions having a first periodicity when said skin surface is exposed to Xray or ultraviolet radiation at a first frequency or intensity of exposure, the applying of said electromagnetic radiation including applying electromagnetic radiation to said skin surface in multiple temporally spaced sessions having a second periodicity when said skin surface is exposed to Xray or ultraviolet radiation at a second frequency or intensity of exposure, said first periodicity being larger than said second periodicity when said first frequency or intensity of exposure is greater than said second frequency or intensity of exposure, said first periodicity being smaller than said second periodicity when said first frequency or intensity of exposure is less than said second frequency or intensity of exposure, said electromagnetic radiation being applied to said skin surface in pulses each of less than about 2 seconds duration.

74. (previously presented) The method defined in claim 73 wherein said predetermined interval begins prior to the exposure of the individual to Xray or ultraviolet radiation.

75. (previously presented) The method defined in claim 73 wherein said predetermined interval begins upon the exposure of said skin surface to Xray or ultraviolet radiation.

76. (previously presented) The method defined in claim 73 wherein said predetermined interval is approximately zero, the application of electromagnetic radiation to said skin surface occurring during exposure of said skin surface to Xray or ultraviolet radiation.

77. (previously presented) The method defined in claim 73 wherein said skin surface is not directly exposed to said source of Xray or ultraviolet radiation.

78-85. (canceled)

86. (previously presented) The method defined in claim 68, further comprising directly exposing a skin area other than said skin surface to a source of Xray or ultraviolet radiation, said skin surface not being exposed to said source of Xray or ultraviolet radiation.

87-93. (canceled)

94. (previously presented) The method defined in claim 68 wherein said treatment sessions increase in number with increasing frequency or intensity of exposure of said skin surface to UV or Xray radiation.

95-104. (canceled)

105. (previously presented) The method defined in claim 68, further comprising transmitting mechanical wave energy into biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface.

106. (previously presented) The method defined in claim 68, further comprising applying a magnetic field to biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface.

107. (canceled)

108. (canceled)

109. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore,

the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, said electromagnetic radiation being broadband radiation including visible wavelengths as well as infrared wavelengths, between 400 nm and 1200 nm, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

110. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the

skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, said electromagnetic radiation including one or more single or isolated wavelengths, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

111. (previously presented) The method defined in claim 110, wherein said electromagnetic radiation consists essentially of said one or more single or isolated wavelengths.

112. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore and in the absence of visible Xray or ultraviolet radiation damage on said skin surface, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated during or after the exposure of the individual to Xray or ultraviolet radiation, within a predetermined interval of such exposure, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors



and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

113. (canceled)

114. (canceled)

115. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure

of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, further comprising transmitting an additional form of wave energy into biological tissues along said skin surface prior to, during or after the applying of said electromagnetic radiation to said skin surface, said additional form of wave energy being taken from the group consisting of mechanical wave energy and magnetic field wave energy, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

116. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore, the applying of said electromagnetic radiation including selecting pulse parameters

including pulse duration and total energy so as to at least reduce the incidence or likelihood of radiation dermatitis caused by exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray ~~or ultraviolet radiation~~ during that time interval.

117. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore, the applying of said electromagnetic radiation including selecting pulse parameters

including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray radiation or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the electromagnetic radiation is absorbed by melanin in the epidermis and hemoglobin in the capillaries and blood vessels of the dermis, increasing heat of melanin, blood vessel walls, keratinocytes, collagen and Langerhans cells, to promote healing, collagen synthesis and remodeling and reduce the likelihood of occurrence of at least one kind of potential non-cancerous visible skin damage taken from the group consisting of radiation burns, sunburns, chronic redness, chronic scaling and dry skin, hypopigmentation, hyperpigmentation, atrophy, thinning, edema, swelling, fine blood vessel prominence, wrinkles and scarring, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray or ultraviolet radiation during that time interval.

118. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual in the absence of an applied exogenous chromophore, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning, the electromagnetic radiation having

wavelengths limited to a band taken from the group consisting of between 400 nm and 550 nm and between 700 nm and 900 nm.

119. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, pulses of electromagnetic radiation to a skin surface of an individual in the absence of any visible damage from ultraviolet or Xray radiation along said skin surface, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions occurring without applying exogenous chromophores to said skin, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said pulses of electromagnetic radiation being characterized by parameters including pulse duration of less than about 2 seconds, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning and effectively prevents skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to

the skin including radiation dermatitis, sunburns, and poikiloderma;

subjecting said skin surface to x-rays or ultraviolet radiation within one week of said applying at least one (1) of said temporally spaced treatment sessions.

120. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation within three (3) days of said applying at least one (1) of said temporally spaced treatment sessions.

121. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation within one (1) day of said applying at least one (1) of said temporally spaced treatment sessions.

122. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation after said applying at least one (1) of said temporally spaced treatment sessions.

123. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation within one (1) week after said applying at least one (1) of said temporally spaced treatment sessions.

124. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation within three (3) days after said applying at least one (1) of said temporally spaced treatment sessions.

125. (previously presented) The method defined in claim 119 wherein said skin surface is subjected to said x-rays or ultraviolet radiation within one (1) day after said applying at least one (1) of said temporally spaced treatment sessions.

126. (previously presented) The method defined in claim 119 wherein said pulses of electromagnetic radiation each have wavelengths between 400nm and 1200nm only.

127. (previously presented) The method defined in claim 68 wherein said predetermined interval is less than one week.

128. (previously presented) The method defined in claim 68 wherein said predetermined interval is less than three days.

129. (previously presented) The method defined in claim 68 wherein said predetermined interval is less than one day.

130. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least



reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated at a regular interval of at most weekly regardless of the exposure of the individual to Xray or ultraviolet radiation and regardless of the visible condition of said skin surface, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning.

131. (previously presented) The method defined in claim 130 wherein said regular interval is at most three days.

132. (previously presented) The method defined in claim 130 wherein said regular interval is at most one day.

133. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, electromagnetic radiation to a skin surface of an individual, the applying of said electromagnetic radiation including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma caused by exposure of the individual to Xray or ultraviolet radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval prior to or during the exposure of the individual to Xray or ultraviolet radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis, sunburns, and poikiloderma, the applying of said electromagnetic radiation to said skin surface increasing the local temperature in skin structures including blood vessel cell walls and keratinocytes in the skin to stimulate a healing response and a release of growth factors and other tissue substances, without permanently damaging any skin structures, said electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin and generates no visible damage such as tanning.

134. (currently amended) A skin ~~treatment~~ injury or damage prevention method for at least reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis and poikiloderma, said method comprising periodically applying, in temporally spaced treatment sessions, pulses of electromagnetic radiation to a skin surface of an individual, the applying of said pulses including selecting pulse parameters including pulse duration and total energy so as to at least reduce the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis caused by exposure of the individual to Xray radiation, the applying of said electromagnetic radiation to said skin surface in each of said treatment sessions being effectuated within a predetermined interval of the exposure of the individual to Xray radiation, thereby effectively preventing skin injury or damage by reducing the incidence or likelihood of non-cancerous visible damage to the skin including radiation dermatitis and poikiloderma, said pulses of electromagnetic radiation being characterized by parameters including pulse duration, wavelength and total energy so selected that the applying of said electromagnetic radiation promotes healthy skin, wherein the number of said treatment sessions in a given time interval is determined at least in part by the frequency or intensity of exposure to Xray radiation during that time interval.